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on February 6, 2006

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02/06/06  
Date of  
Signature

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Customer No.: 000201  
Attorney Docket No.: C4274(C)  
Appellants: Casey et al.  
Serial No.: 10/726,738  
Filed: December 3, 2003  
For: Detergent Compositions

Group: 1751  
Examiner: Necholus Ogden, Jr.  
Englewood Cliffs, New Jersey 07632  
February 6, 2006

**BRIEF FOR APPELLANTS**

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Sir:

Enclosed herewith are three (3) copies of an Appeal Brief for Appellants.

Please charge the \$500.00 fee to our Deposit Account No. 12-1155. Any deficiency or overpayment should be charged or credited to this Deposit Account. This authorization is submitted in triplicate.

Respectfully submitted,

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Serial No.: 10/726,738  
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UNUS No.: 02-0529-UNI

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**I. REAL PARTY IN INTEREST**

The real party in interest is Unilever Home and Personal Care USA, Division of CONOPCO, Inc., a corporation of New York having a principal place of business at 33 Benedict Place, Greenwich, Connecticut 06830.

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**II. RELATED APPEALS AND INTERFERENCES**

There are no related appeals or interferences.

**III. STATUS OF CLAIMS**

A. **TOTAL NUMBER OF CLAIMS IN APPLICATION**

Eleven (11) claims are presently pending.

B. **STATUS OF ALL THE CLAIMS**

Claims rejected – Claims 1-11

C. **CLAIMS ON APPEAL**

Claim 1-11 are on appeal.

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**IV. STATUS OF AMENDMENTS**

No amendments were presented after Final Rejection.

#### V. SUMMARY OF THE CLAIMED SUBJECT MATTER

The subject matter of independent claim 1 relates to an anionic surfactant particle for use in the laundry detergent composition. The anionic surfactant particle having a total anionic surfactant content of at least 95 wt% and comprising linear alkylbenzene sulphonate (LAS) and primary alcohol sulphate (PAS) in a weight ratio of from 5:1 to 1:3.

According to applicants' invention, a particle of LAS and PAS containing little or no inorganic salt can be prepared which combines low hygroscopicity with an excellent detergency profile. Therefore the objective technical problem solved by the present invention is how to produce a particle that has low hygroscopicity and an excellent detergency profile. This problem is solved by the formation of a composite particle having a total anionic surfactant content of at least 95wt% and a LAS/PAS ratio of from 5:1 to 1:3. See also page 2, last paragraph of the specification.

**VI. GROUNDS OF REJECTIONS TO BE REVIEWED UPON APPEAL**

The Grounds of Rejections to be Reviewed Upon Appeal are defined by the Examiner's rejections and are as follows:

- I. Claims 1-10 are rendered obvious, under 35 U.S.C. §103(a), by WO 97/32005.

## VII. ARGUMENT

### I. Claims 1-10 are not rendered obvious, under 35 U.S.C. §103(a), by WO 97/32005.

As correctly stated by the Examiner, WO '005 does not disclose:

- an anionic surfactant particle for use in a laundry detergent composition the particle having a total anionic surfactant content of at least 95wt%;
- LAS/PAS ratio of from 5:1 to 1:3.

The present claims are directed to an anionic surfactant particle. This anionic surfactant particle is to be incorporated or admixed in with other conventional detergent particles which make up a complete composition.

Having a separate particle as claimed in the present invention means that a high level of anionic surfactant can be incorporated without limiting the process and powder property requirements of the bulk of the detergent ingredients. This is because this anionic surfactant granule, (which contains an anionic surfactant content of 95 wt%), is made separately from the bulk of the detergent composition and it is admixed later with a 'normal' detergent composition.

Therefore having a separate anionic surfactant particle has significant advantages over adding anionic surfactant in with builders as part of a conventional detergent composition. As this particle does not need to be processed with the bulk of the other laundry détergent ingredients. Therefore not only does it allow the status quo to be maintained in terms of processing the base powder, it also means that very high levels of anionic surfactant can be added to such a final composition by means of this separate anionic surfactant granule. See pages 1-2 of the specification.

According to applicants' invention, a particle of LAS and PAS containing little or no inorganic salt can be prepared which combines low hygroscopicity with an excellent detergency profile. Therefore the objective technical problem solved by the present invention is how to produce a particle that has low hygroscopicity and an excellent detergency profile. This problem is solved by the formation of a composite particle having a total anionic surfactant content of at least 95wt% and a LAS/PAS ratio of from 5:1 to 1:3.

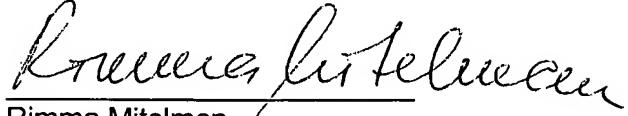
WO '005 seeks to solve a problem of providing an effective degree of detergency in a laundry composition. WO '005 teaches that there is a maximum level of active that can be incorporated to achieve this, see page 1 lines 18-19, and lines 29 to 31, line 34 to page 2 line 6, and that these problems of an inadequate maximum can be overcome by the incorporation of at least 15% by weight of phosphate builder, and aluminosilicate builder. It teaches that the zeolite component is essential to achieve good powder properties, see the control example page 18. One of ordinary skill in the art seeking to improve the detergency would have been led by WO '005 to add phosphate and aluminosilicate and would not therefore have been motivated to work within the ranges and at the levels disclosed in the present invention. Especially as an essential component of the invention in WO '005 is the requirement of at least 15wt% of phosphate to achieve the required results, this would not leave formulation space for the incorporation of the levels of surfactant in the presently claimed invention.

Motivation to modify must come from the prior art. It is not seen what in WO '005 would have led one of ordinary skill in the art to change the total anionic surfactant content and to employ a particular range of the ratio of LAS/PAS. On the contrary, as discussed above, WO '005 provides a disincentive for such changes.

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Appellants respectfully request the Board of Patent Appeals and Interferences to reverse the Examiner's final rejection.

Respectfully submitted,

  
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### VIII. APPENDIX OF CLAIMS

The text of the claims involved in the appeal is:

Claim 1 An anionic surfactant particle for use in a laundry detergent composition, the particle having a total anionic surfactant content of at least 95 wt% and comprising linear alkylbenzene sulphonate (LAS) and primary alcohol sulphate (PAS) in a weight ratio of from 5:1 to 1:3.

Claim 2 An anionic surfactant particle as claimed in claim 1, having a total anionic surfactant content of at least 98 wt%.

Claim 3 An anionic surfactant particle as claimed in claim 1, wherein the ratio of LAS to PAS is within the range of from 3:1 to 1:2.

Claim 4 An anionic surfactant particle as claimed in claim 1, having an inorganic salt content not exceeding 2 wt%.

Claim 5 An anionic surfactant particle as claimed in claim 1, wherein the PAS has an average alkyl chain length within the range of from C<sub>10</sub> to C<sub>16</sub>, preferably from C<sub>12</sub> to C<sub>14</sub>.

Claim 6 An anionic surfactant particle as claimed in claim 1, wherein the anionic surfactants are in sodium salt form.

Claim 7 An anionic surfactant particle as claimed in claim 1, which is the form of a flake.

Claim 8 A process for the preparation of an anionic surfactant particle as claimed in claim 1, which comprises the steps of

- (i) reacting LAS acid with sodium carbonate to form sodium LAS and water,
- (ii) admixing PAS in any suitable form,
- (iii) drying the resulting mixture to a solid form, and
- (iv) comminuting to form particles.

Claim 9 A particulate detergent composition comprising an anionic surfactant particle as claimed in claim 1, in admixture or conjunction with one or more other solid detergent ingredients.

Claim 10 A particulate detergent composition as claimed in claim 1, which comprises

- (a) a base powder composed of composite granules comprising surfactant and builder,
- (b) anionic surfactant particles as claimed in claim 1,
- (c) optionally postdosed detergent ingredients.

Claim 11 A particulate detergent composition as claimed in claim 10, having a total anionic surfactant content of at least 20 wt%.

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**IX. EVIDENCE APPENDIX**

None.

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**X. RELATED PROCEEDINGS APPENDIX**

None.